

Application No. 10/566,373
Reply to Office Action of June 2, 2008

IN THE DRAWINGS

The attached sheets of drawings includes changes to Figs. 1-5. These sheets, which includes Figs. 1-5, replaces the original sheet including Figs. 1-5.

Attachment: Replacement Sheets

REMARKS/ARGUMENTS

Support for each amended claim and the amended drawings is found, for example, throughout the originally filed claims and the originally filed specification.

No new matter is believed to have been added.

The objections to Claims 3-6 are obviated by amendment of Claims 3-6.

The objection to Claim 9 is respectfully traversed: Applicants respectfully submit that Claim 9 does not contain the term “mating agent” (see the Preliminary Amendment filed January 30, 2006). Because Claim 9 does not contain the term “mating agent,” no spelling correction of this term is needed.

The objection to Claim 10 is respectfully traversed. Applicants respectfully submit there is no comma between the words “pharmaceuticals” and “agrochemicals” (see the Preliminary Amendment filed January 30, 2006) and that the term “and/or” that is found in Claim 10 is acceptable.

The objection to the drawings is obviated by submission, along with this paper, of replacement drawings.

The indefiniteness rejection of Claims 1-11 is respectfully traversed. The rejection of Claims 1 and 2 is believed to be obviated by the amendments to Claims 1 and 2. The rejection of Claims 3-6 is believed to be obviated by removal of the term “JISK6217-4 (a carbon black for rubber-basic characteristics),” and by amending Claim 3 to describe “wherein the amorphous silica particle has an oil absorption,” thus creating proper antecedent basis for the term “the oil absorption.” The rejection of Claim 7 is believed to be obviated by the amendment of Claim 7 to recite the units “min/100g.” Applicants respectfully submit that the number in Claim 8 is a dimensionless number (see formula for OI2 at page 15 of the originally filed specification) and that this claim need not be amended. Withdrawal of the indefiniteness rejection of Claims 1-11 is respectfully requested.

The anticipation and obviousness rejections of Claims 1-11 as being unpatentable in view of Kuhlmann are respectfully traversed because the inventive embodiments of present Claim 1, and the claims depending therefrom, are different from the products of Kuhlmann.

At the outset, Applicants note the processes of making the presently claimed silica particle(s) inventive embodiments (e.g., present Claims 1-8), and the claims depending therefrom, are different from the processes of making the inventive embodiments Kuhlmann. These differences in the processes result in different products that display different properties.

For example, in Table 1 below, key steps in the processes of Examples 1 and 2 (of the invention) and Kuhlmann (not of the invention) are shown: Table 1

Step / Parameter	<u>Kuhlmann</u> Paragraphs 15 and 34	Example 1	Example 2
1. Precipitation Step	Sulfuric acid and sodium silicate solution added <u>simultaneously</u>	<u>Solely</u> sulfuric acid added to sodium silicate solution	<u>Solely</u> sulfuric acid added to sodium silicate solution
Temperature at Precipitation Step 1 (°C)	34-45	95	95
Ageing after Precipitation Step 1	35 to 40°C for 60 to 120 min	None	95 °C for 90 min
2. Precipitation Step	Sulfuric acid and sodium silicate solution added <u>simultaneously</u>	None	Sulfuric acid and sodium silicate solution added <u>simultaneously</u>
Temperature at Precipitation Step 2 (°C)	34-45	—	95

As shown in Table 1, both Example 1 (of the invention) and Example 2 (of the invention) differ in more than one parameter from the process of Kuhlmann. For example, the precipitation temperature of Examples 1 and 2 (e.g., 95 °C) is substantially higher than the precipitation temperature of Kuhlmann (e.g., 34-45 °C). Additionally, for example, in the precipitation step 1 of Examples 1 and 2, sulfuric acid is added to the sodium silicate solution whereas in precipitation step 1 of Kuhlmann, sulfuric acid and sodium silicate solution are added simultaneously.

Applicants submit that one of ordinary skill in the art would readily understand that small changes in the production processes of silica result in drastic changes in the resulting properties of the products produced by the production processes.

Because the production processes of the present silica inventive embodiments and Kuhlmann are different, the products are different, and Kuhlmann cannot describe or suggest the silica of present Claim 1, and the claims depending therefrom.

Additionally, in support of this argument, Applicants note that comparison Example 3 (not of the invention) describes the properties of SIPERNAT® 50S, a silica of Degussa. Accompanying this paper, Applicants have submitted product information relating to SIPERNAT® 50S. The properties of SIPERNAT® 50S are similar to the silica of Kuhlmann, with the exception of differences in DBP values. Applicants note, however, that SIPERNAT® 50S has a pore peak radius that is far outside of the range of, for example, present Claim 1.

Because the silicas of present Claim 1 and the claims depending therefrom are made using different processes from that of Kuhlmann, and because one of ordinary skill in the art would understand that small changes in processes lead to large changes in products, the products of present Claim 1, and the claims depending therefrom, are not described or

suggested by Kuhlmann. Withdrawal of the anticipation and obviousness rejections is respectfully requested on this basis alone.

Additionally, Applicants traverse the obviousness rejection in view of Kuhlmann on the basis of superior and unexpected results. As described at, for example, paragraph 8 of the originally filed specification, the present silica has improved properties of high shear stress tolerance, high oil absorbing rate, and an oil absorbency that is not easily decreased. Applicants submit these superior results are not described or suggested by Kuhlmann. Thus, based on the disclosure of Kuhlmann, these superior results are unexpected results. Applicants submit these superior and unexpected results are the type of secondary consideration envisioned by the MPEP to address a *prima facie* case of obviousness. Withdrawal of the obviousness rejection is respectfully requested.

The anticipation and obviousness rejections of Claims 1-4 and 7-11 as being unpatentable in view of Boyer are respectfully traversed because the inventive embodiments of present Claim 1, and the claims depending therefrom, are different than the products of Boyer.

At the outset, Applicants note the processes of making the presently claimed silica particle(s) inventive embodiments (e.g., present Claims 1-4), and the claims depending therefrom, are different from the processes of making the inventive embodiments Boyer. These differences in the processes result in different products that display different properties.

For example, in Table 2 below, key steps in the processes of Examples 1 and 2 (of the invention) and Boyer (not of the invention) are shown: Table 2

Step / Parameter	Boyer Example 1	Example 1	Example 2
1. Precipitation Step	Sulfuric acid and sodium silicate solution added <u>simultaneously</u>	<u>Solely</u> sulfuric acid added to sodium silicate solution	<u>Solely</u> sulfuric acid added to sodium silicate solution
Electrolyte Present at Beginning of Precipitation	<u>Yes (Sodium Sulfate)</u>	<u>No</u>	<u>No</u>
Ageing after Precipitation Step 1	95°C for <u>70 min</u>	<u>No</u>	95 °C for <u>90 min</u>
2. Precipitation Step	No	No	Sulfuric acid and sodium silicate solution added <u>simultaneously</u>

As shown in Table 1, both Example 1 (of the invention) and Example 2 (of the invention) differ in more than one parameter from the process of Boyer. For example, the precipitation step 1 of Examples 1 and 2 adds sulfuric acid to a sodium silicate solution, whereas in Boyer, sulfuric acid and sodium silicate solution are added simultaneously. Additionally, for example, in the precipitation step 1 of Examples 1 and 2, no electrolyte is present, whereas in Boyer, electrolyte (e.g., sodium sulfate) is present. Further, in Example 1, ageing is not conducted after precipitation step 1; whereas in Boyer, ageing is conducted. Moreover, in Example 2, a precipitation step 2 is conducted; whereas in Boyer, no precipitation step is conducted.

As described above, Applicants submit that one of ordinary skill in the art would readily understand that small changes in the production processes of silica result in drastic changes in the resulting properties of the products produced by the production processes.

Because the production processes of the present silica inventive embodiments and Boyer are different, the products are different, and Boyer cannot describe or suggest the silica of present Claim 1, and the claims depending therefrom.

Because the silicas of present Claim 1 and the claims depending therefrom are made using different processes from that of Boyer, and because one of ordinary skill in the art would understand that small changes in processes lead to large changes in products, the products of present Claim 1, and the claims depending therefrom, are not described or suggested by Boyer. Withdrawal of the anticipation and obviousness rejections is respectfully requested on this basis alone.

Additionally, Applicants traverse the obviousness rejection in view of Boyer on the basis of superior and unexpected results. As described at, for example, paragraph 8 of the originally filed specification, the present silica has improved properties of high shear stress tolerance, high oil absorbing rate, and an oil absorbency that is not easily decreased.

Applicants submit these superior results are not described or suggested by Boyer. Thus, based on the disclosure of Boyer, these superior results are unexpected results. Applicants submit these superior and unexpected results are the type of secondary consideration envisioned by the MPEP to address a prima facie case of obviousness. Withdrawal of the obviousness rejection is respectfully requested.

The obviousness rejection of Claims 5-6 and 9-10 as being unpatentable in view of Boyer and Kuhlmann is respectfully traversed.

The rejection of Claims 5-6 9-10 is traversed because the references, either alone or in combination, as described above, do not suggest all of the features of these claims (that depend, directly or indirectly, from Claim 1). Withdrawal of the obviousness rejection is requested on this basis alone.

Additionally, the rejection of Claims 5-6 is traversed because the references are not-combinable. Applicants note Claims 5 and 6 contain, as features, that the oil absorption is “more than 300 ml/100g” and “is more than 320 ml/100g,” respectively. Applicants note that Boyer, in the Abstract, describes an oil absorption of from 180 to 300 cm²/100g, and at column 4, lines 11-15, describes an oil absorption of up to 300 cm²/100g, preferably from 180 to 260 cm²/100g. The combination of references would, if the Office is correct, modify the oil absorption of Boyer to a range outside of the maximum values described by Boyer, thus rendering the references un-combinable. Indeed, one of ordinary skill in the art, in reading Boyer as a whole, would understand that Boyer “teaches away from” the absorption ranges in present Claims 5-6. Withdrawal of the obviousness rejection is requested for present Claims 5-6 on this basis alone.

Concerning the double patenting rejection: Applicants respectfully request, should the Office find the application otherwise in condition for allowance, that the Examiner contact the Applicants US representative to discuss the possibility of filing a terminal disclaimer.

Applicants submit the present application is now in condition for allowance. Early notification to this effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon



Charles J. Andres, Jr., Ph.D.
Attorney of Record
Registration No. 57,537

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)